



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of
STROBEL, et al.

Application No.: **10/634,979**

Filed: **August 5, 2003**

Title: **ACYLAMINO-SUBSTITUTED HETEROAROMATIC
COMPOUNDS AND THEIR USE AS PHARMACEUTICALS**

Examiner: Not Yet Known

Art Unit:

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on

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INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. 1.56, 1.97 AND 1.98

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Applicants submit herewith patents, publications, and other information of which they are aware, which they believe may be material, as defined in 37 C.F.R. 1.56(b), to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 C.F.R. 1.56(a). While the information referred to in this Information Disclosure Statement may be material pursuant to 37 C.F.R. 1.56(b), the filing of this Information Disclosure Statement is not intended to, pursuant to 37 C.F.R. 1.97(h), constitute an admission that any patent, publication or other information referred to is, or is considered to be, material to the patentability of this invention. Pursuant to 37 C.F.R. 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information exists.

(a) This Information Disclosure Statement is filed within the period set forth in §1.97(b) because it accompanies the new patent application submitted herewith, is filed within three months of the filing date of a national application or within three months of the date of entry of the national stage as set forth in §1.491 in an international application, or is believed to be filed before the mailing date of a first Office Action on the merits, whichever event occurs last. However, in the event that the first office action has been mailed, the Commissioner is authorized to charge any fees under 37 C.F.R. 1.17(p) or credit any overpayment to Account No. **18-1982**.

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- (1) The undersigned attorney certifies that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement;
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The following listed references are in a language other than English, and an English translation is not readily available. Thus, pursuant to 37 C.F.R. § 1.98, Applicants submit herein concise explanations of these references:

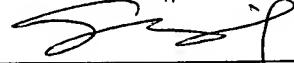
WO 00/27819 discloses a series of anthranilic acid amides, useful in the treatment of diseases that are triggered by persistent angiogenesis.

Bellasio et al., *Farmaco, Ed. Sc.*, Vol. 28, 2, (1978), pp 164-182, discloses the synthesis of some 2-acylamino, 2-benzoylamino and 2-phenylacylamino benzimidazoles.

Bogoslowskii et al., *Zhurnal Obshchey Khimii*, Vol.14, (1944), pp 316-318, discloses the synthesis of some derivatives of aminoquinolines.

Pilyugin V.S., et al., *Bashk. Khim. Zh.* (2001), Tom 8, No. 1, pp 18-25, discloses the synthesis and biological activity of derivatives of 2-aminobenzimidazole and carboxylic acids.

Respectfully submitted,



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Aventis Docket No. DEAV2002/0056 US NP



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PTO/SB/08A (10-96)

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Sheet	1	of	5	Application Number	10/634,979
				Filing Date	08-05-2003
				First Named Inventor	STROBEL
				Group Art Unit	
				Examiner Name	Not Yet Known
				Attorney Docket Number	DEAV2002/0056 - US - NP

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

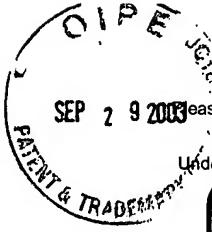
FOREIGN PATENT DOCUMENTS								
Examiner Initials ¹	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
		EP	EP 1 277 729 A1	?	AMEMIYA et al	01-22-2003		
		WO	W0 00/03746	?	LIAO	01-27-2000		
		WO	W0 00/27394	?	SELWOOD et al	05-18-2000		
		WO	W0 00/27819	?	HUTH et al	05-18-2000		
		WO	W0 01/97786	?	ALANINE et al	12-27-2001		
		WO	W0 02/064545 A1	?	STROBEL et al	08-22-2002		
		WO	W0 02/064546 A2	?	STROBEL et al	08-22-2002		
		WO	W0 02/064565 A1	?	STROBEL et al	08-22-2002		
		WO	W0 02/34711 A1	?	BABU et al	05-02-2002		
		WO	W0 99/47153	?	LIAO	09-23-1999		

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Sheet 2 of 5

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Application Number	10/634,979
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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		BELLASIO E et al., Sostanze A Potenziale Azione Cardiovascolare. 2-acilaminobenzimidazoli ad attivita ipotensiva, Farmaco, Ed. Sc., Vol. 28, 2, 1978, pp 164-182
		BOGOSLOWSKII et al, Synthesis of some Derivatives of Aminoquinolines, Zhurnal Obshchey Khimii; Vol.14; 1944; pp.316-318.
		BUSCEMI et al, Heterocyclic Photorearrangements. Photochemical Behaviour of Some 3,5-Disubstituted 1,2,4-Oxadiazoles in Methanol at 254 nm., Journal of Heterocyclic Chem.; Vol. 25; May-June 1988; pp.931-935
		BUSCEMI et al., Heterocyclic Photorearrangements. Photoinduced Rearrangements of 1,2,4-Oxadiazoles Substituted by an XYZ Side Chain Sequence, Journal of Heterocyclic Chem.; Vol. 25; Sept-Oct. 1988; pp.1551-1553.
		ELINA et al, Tautomerism of 2-Acetylaminooxazolines and Their N-Oxides, Chem. Heterocyclic Compd.(Eng. transl.); No.2; 1966; pp.72-76. .
		ENDRES M et al., Stroke protection by 3-hydroxy-3-methylglutaryl (HMG)-CoA reductase inhibitors mediated by endothelial nitric oxide synthase, Proc. Natl. Aca. Sci. USA 95, 1998, Vol. 95, pp 8880-8885
		HARSANYI et al, Redox-Aromatisierung des 2-Oximino-1,2,3,4-tetrahydrochinoxalins und seiner Acylderivate, Chem. Ber.; No.105; 1972; pp.813-819.
		KHRISTICH et al, The Benzoylation of 2-Amino-1-Methylbenzimidazole, Chem. Heterocycl. Compd. (Eng. Transl.); No. 9; 1973; pg.1174.
		KHRISTICH, B.I., et al., Synthesis and Transformations of 2-Amino-3-Acyl-1-Methylbenzimidazolium Salts, Chemistry of Heterocyclic Compounds (Eng. Translation), No. 10, October 1974, pp. 1225-1228.
		LAUFS Ulrich et al., Upregulation of Endothelial Nitric Oxide Synthase by HMG CoA Reductase Inhibitors, Circulation 97, 1998, pp 1129-1135

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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No. ¹	
		include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		LI Huige et al., Activation of Protein Kinase C(alpha) and/or (epsilon) Enhances Transcription of the Human Endothelial Nitric Oxide Synthase Gene, Mol. Pharmacol., 1998, Vol. 53, pp 630-637
		MOROI Masao et al., Interaction of Genetic Deficiency of Endothelial Nitric Oxide, Gender, and Pregnancy in Vascular Response to Injury in Mice, J. Clin. Invest., 1998, Vol. 101, No. 6, pp 1225-1232
		NAKAYAMA Masafumi et al., T-786-->C Mutation in the 5'-Flanking Region of the Endothelial Nitric Oxide Synthase Gene Is Associated with Coronary Spasm, Clinical Investigation and Reports, Circulation 99, 1999, pp 2864-2870
		PILYUGIN V.S., et al., Synthesis and Biological Activity of Derivatives of 2-Aminobenzimidazole and Carboxylic Acids (Eng. translation), Bashk. Khim. Zh. 2001, Tom 8, No. 1, pp 18-25
		POPOV et al, Condensation of 2-Aminobenzimidazoles with o-Substituted Benzoyl Chlorides, Chem. Heterocyclic Comp. (Eng. Transl.); Vol.25(2); 1989; pg.229.
		RAO et al, Synthesis of 2-Aryl-1H-s-Triazolo[1,5-a]Benzimidazoles, Synthetic Communications; No.18; 1988; pp.1995-2001.
		SESSA William C et al., Chronic Exercise in Dogs Increases Coronary Vascular Nitric Oxide Production and Endothelial Cell Nitric Oxide Synthase Gene Expression, Circulation Research, 1994, Vol. 74, No. 2, pp 349-353
		SHEPARD et al, Carboxylic N,N-Diphenylcarbamic Anhydrides, New Acylating Agents, Journal Heterocyclic Chem.; No.16; 1979; pp.321-325.
		SHIOKAWA et al, Studies on Benzimidazoles and related Compounds. IV. Reactivity of 2-Azido-1-methylbenzimidazole, Chem. Pharm. Bulletin; No.19; 1971; pp.401-408.
		SIMONOV M., et al., Derivatives of 2-Amino-1-Methylbenzimidazole-5-Carboxylic Acid, Journal of General Chemistry of the USSR (Eng. translation), V32, 1962, pp.2194-2196.

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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS		
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		TAKAHASHI et al, 1,3-Dipolar Cycloaddition Reaction with 1-Methylbenzimidazole 3-Oxide, Tetrahedron Letters; No.25; 1963; pp.1687-1691.
		TAKAHASHI et al, Benzimidazole N-Oxides. IV. 1,3-Dipolar Cycloaddition Reaction with 1-Methylbenzimidazole 3-Oxide, Chem. Pharm. Bull.; Vol.12; 1964; pp.1290-1295.
		TAMURA et al, Syntheses and Properties of 3-Acylimino-1-alkylimidazolium and Benzimidazolium Betaines, Journal Heterocyclic Chem.; Vol. 11; 1974; pp.781-785.
		VAN ALLEN et al, The Reaction of Certain Heterocyclic Azides and triphenylphosphine, Journal Heterocyclic Chem; No. 5; Aug. 1968; pp.471-476.
		VARENNE Olivier et al., Percutaneous Gene Therapy Using Recombinant Adenoviruses Encoding Human Herpes Simplex Virus Thymidine Kinase, Human PAI-1, and Human NOS3 in Balloon-Injured Porcine Coronary Arteries, Human Gene Therapy,2000, Vol. 11, pp 1329-1339
		WOLF et al, Substituted Sulfaquinoxalines. Extension of the Glyoxalate Synthesis of 2-Aminoquinoxaline, J. Amer. Chem. Soc.; Vol.71; 1949; pp.6-8.
		WOLF et al, Substituted Sulfaquinoxalines. Some Derivatives and Isomers of 2-Sulfanilamidoquinoxaline, J. Amer. Chem. Soc.; Vol.70; 1948; pg.2572.

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